MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2017 / 2018 SESSION

DOM5018 – OPERATIONS MANAGEMENT

(For Diploma Students Only)

17 MARCH 2018
2.30pm – 4.30pm
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **NINE (9)** pages with **TWO (2)** sections.
2. Answer **ALL** questions.
3. For section A, shade your answers in the OMR sheet provided.
4. For section B, write your answers in the answer booklet provided.

SECTION A: MULTIPLE CHOICE QUESTIONS (each question carries 1 mark). Answers for this section should be shaded on the OMR sheet provided.

1. Which of the following best describes a good operations organisation?

   A. Mango Production follows competitor's design.
   B. Panda Manufacturing has introduced a supply chain management's policy.
   C. Jumbo Warehouse had rent their storage space to their vendor.
   D. Volcano Hotel has introduced three suite rooms for couple.

2. An Operations Manager has to make sure that the employees conduct the quality inspection according to the standard operations procedure. This action refers to _____.

   A. leading
   B. organising
   C. staffing
   D. controlling

3. Which of the following is **NOT** in product-based operations?

   A. Toyota Motors Manufacturing.
   B. Apple Manufacturing.
   C. Hard Rock Café.
   D. Adidas Manufacturing.

4. Toyota and BMW managed to have a joint research and development for car seats. This activity refers to _____.

   A. improve operations
   B. reduce costs
   C. improve products
   D. reduce markets

5. _____ is an activity that transfers operational processes that were traditionally been done internal to external suppliers.

   A. Offshoring
   B. Outsourcing
   C. Value-Chain
   D. Uniqueness

Continued...

6. Pizza Hut sets a standard of '15 minutes waiting period' for customer to receive their orders. This method refers to _____.

   A. experience the differentiation
   B. flexibility is matching market changes
   C. competing on cost
   D. quickness in delivery

7. Forecasting is a process of _____ a future event.

   A. understanding
   B. predicting
   C. preparing
   D. demanding

8. Forecast the inflation rate and currency exchange rate refers to _____.

   A. capacity forecast
   B. economic forecast
   C. technological forecast
   D. demand forecast

9. A 'summer dress' is an example of _____.

   A. trend component
   B. cyclical component
   C. seasonal component
   D. random component

10. In generating new product, Samsung must follow below process **EXCEPT** _____.

    A. understand the customers' demand
    B. understand the shareholders' demand
    C. understand the changes of technology
    D. understand the changes of demographic

11. A list that specifically includes setup time and operations process known as _____.

    A. assembly chart
    B. assembly drawing
    C. route sheet
    D. work order

Continued...

12. _____ is a group of employees who meets regularly to solve problem.

A. Quality Circle
B. Taguchi concept
C. Employee Empowerment
D. Six Sigma

13. Cause-and-effect diagram is a tool to _____.

A. identify causes that may affect an outcome
B. organise a recorded data
C. identify problem in descending order
D. organise two variables

14. A quality inspector uses a document to ensure consistency and completeness of process. The document is a _____.

A. delivery order
B. purchase order
C. check order
D. checklist

15. The four process strategies are as below **EXCEPT** _____.

A. repetitive focus
B. product focus
C. process focus
D. variety focus

16. Capacity decision must be _____ into the organisation's mission and strategy.

A. absorbed
B. integrated
C. measured
D. exceeded

17. Albert has decided to open a new hotel in Kuala Kangsar, Perak. One of the considerations in choosing the best location is _____.

A. the uniqueness of the location to attract more customer
B. the room layout should have bigger space
C. the Hotel Manager is friendly and warm
D. the hotel provide large swimming pool

Continued...

18. Intangible costs in location decision consists of _____.

A. education
B. utilities
C. labour
D. materials

19. A manufacturer is required to pay an amount of _____ fees to retailers to display their products at the retailer's shop.

A. booking
B. slotting
C. point-of-sales
D. just-in-time

20. Assembly line balancing is important to minimise the imbalance between machine and _____ while meeting the required output.

A. product
B. personnel
C. material
D. method

21. "Labour is treated as variable cost" in labour planning policies refers to _____.

A. match the direct labour cost to production
B. hold the employment constantly
C. maximise the hiring process
D. maintain the trained workforce

22. Melinda is a Purchasing Executive whom has been assigned to have a six months attachment to three different departments. This practice known as _____.

A. job enrichment
B. job enlargement
C. job rotation
D. job specialisation

Continued...

23. Manufacturers can assign the distributors to become their manufacturing partners. This method refers to _____.

A. channel assembly
B. just-in-time
C. keiretsu
D. kaizen

24. Large lots may help reducing the shipping cost but it will _____.

A. decrease the inventory holding cost
B. decrease the product's standardisation
C. increase the inventory holding cost
D. increase the product's standardisation

25. _____ inventory has undergone some changes in operations but has not been completed.

A. Raw material
B. Work in process
C. Maintenance
D. Finished goods

26. ABC analysis is a method where inventory can be divided into _____ classes based on annual volume.

A. two
B. three
C. four
D. five

27. "When in doubt, throw it out" refers to _____.

A. segregate
B. straighten
C. shine
D. standardise

28. Poka-yoke devices can help the operations to implement _____.

A. lean quality
B. lean layout
C. lean inventory
D. lean scheduling

Continued...

29. Gemba walks is important to build lean organisation because _____.

A. manager able to supervise the inventory
B. manager able to observe the work being performed
C. manager able to check the raw materials
D. manager able to collaborate with the suppliers

30. Total Productive Maintenance combines the elements of _____ and _____.

A. TQM; predictive maintenance
B. TQM; preventive maintenance
C. TQM; breakdown maintenance
D. TQM; sustainability maintenance

[TOTAL 30 MARKS]

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SECTION B: STRUCTURED QUESTIONS.
Answer ALL questions.

QUESTION 1

The objective of maintenance and reliability is to maintain the capability of the system.

a) List the **FOUR (4)** factors that affect maintenance and reliability of an organisation. (4 marks)

b) Describe **TWO (2)** types of maintenance and provide **ONE (1)** example each. (6 marks)

c) List the **FIVE (5)** components of Autonomous Maintenance. (5 marks)

QUESTION 2

Sweet Lavender Sdn. Bhd. has been selling babywear for almost 7 years in Malaysia. Recently, the top management has decided to expand the business to several Asian countries. As an Operations Manager, you are about to present the proposal on the layout and location decision.

a) Describe any **THREE (3)** considerations of a good layout. (6 marks)

b) Suggest **TWO (2)** layouts that are appropriate for babywear production and justify your answer. (4 marks)

c) List the **FIVE (5)** key success factors on country decision. (5 marks)

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QUESTION 3

a) Jimmy is the Operations Manager for electronics manufacturing company. His job required him to manage 2 plants which located in Melaka and Johor.

Melaka Plant	Johor Plant
Design capacity: 1800 units	Design capacity: 2000 units
Effective Capacity: 1500 units	Effective Capacity: 1800 units
Actual Production: 1300 units	Actual Production: 1600 units

Exhibit 1

i. Calculate the utilisation rate for Melaka plant. (2 marks)

ii. Calculate the utilisation rate for Johor plant. (2 marks)

iii. Calculate the efficiency rate for Melaka plant. (2 marks)

iv. Calculate the efficiency rate for Johor plant. (2 marks)

b) Jimmy has decided to implement Kanban system in the operations department. In order to have a smooth operations flow, three areas must apply Kanban which are fabrication line, assembly line and warehouse.

Fabrication line	**Assembly line**	**Warehouse**
Daily demand: 1250 units	Daily demand: 1250 units	Daily demand: 1250 units
Lead time: 1 day	Lead time: 0.5 day	Lead time: 2 days
Safety stock: 0.5 day	Safety stock: 0.5 day	Safety stock: 1 day
Kanban size: 375 units	Kanban size: 125 units	Kanban size: 125 units

Exhibit 2

i. How many kanbans needed for the fabrication line? (4 marks)

ii. How many kanbans needed for the assembly line? (4 marks)

iii. How many kanbans needed for the warehouse? (4 marks)

Continued...

QUESTION 4

'Implement ergonomics management at workplace'
November 24, 2017, Friday

SIBU: Industry players should start implementing systematic approach to ergonomics management at the workplace, says National Institute of Occupational Safety and Health (Niosh) chairman Tan Sri Lee Lam Thye. He pointed out that ergonomics should also be part of the management system.

Among them are the establishment of procedures relating to the organisation of ergonomics in the workplace, ergonomic risk identification and risk assessment methods and procedures, early reporting and investigation of disease, elements of training, procedures of the selection and supply of equipment based on ergonomic consideration.

"Previously, most of the ergonomic promotions were only made through campaign poster or short talk given to the employees. Nowadays, due to increased awareness and the efforts made by all parties, a lot of industry have started to take a more serious view to manage this problem," he noted. As for organisational ergonomics, it is concerned with the optimisation of sociotechnical systems, including their organisational structures, policies and processes.

"These three major domains give us a lot of opportunities to address ergonomics issues at work such as workstations/tasks/tools design, environmental assessment, human error analysis, ergonomics management system and so on," Lee said.

Adapted from http://www.theborneopost.com/2017/11/24/implement-ergonomics-management-at-workplace/

a) Define '*ergonomics*'. (2 marks)

b) Based on the article above, describe any **THREE (3)** procedures that Niosh has established for ergonomic management system in the workplace. (6 marks)

c) List the **FOUR (4)** work environments. (4 marks)

d) On the other hand, work schedules play an important role to human resources strategy. Explain the **FOUR (4)** work schedules. (8 marks)

[TOTAL 70 MARKS]

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